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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,279

Applicant(s)

HALL ET AL.

Examiner

Matthew A. Thexton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>one sheet</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

The IDS submitted 2004 March 26 has(have) been considered.

Drawings

The drawings were received on 2004 September 8. These drawings are unacceptable. The submitted drawings are not in compliance with 37 CFR 1.121(d), specifically: they are not labeled "Replacement Sheet". Additionally, the replacement drawings suffer from the same deficiencies noted in the Office communication mailed 2004 June 8.

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because: see the Office communication mailed 2004 June 8. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: The specification is not in compliance with 37 CFR 1.52(b)(6), specifically: the paragraph numbering does not include four digits.

Appropriate correction is required.

Claims Version

The listing of claims submitted in the paper filed originally has been examined.

Claims Analysis

Claim 1 is directed to methods for inhibiting corrosion of a metal substrate comprising:

-“contacting” said substrate with a corrosion inhibiting amount of a composition comprising:

- (a) at least one quaternary ammonium compound selected from quaternary ammonium carbonate, quaternary ammonium bicarbonate, and mixtures; and
- (b) optionally, a solvent.

Claims 2-17 depend directly or indirectly from claim 1 and specify or further limit: the type of quats; the further presence and type of (c) surfactants; the presence of “an oil environment” which may be “a petroleum distillate” which may be “kerosene, white spirit, hydrocarbon fractions, and mixtures;” the further presence and type of (d) through (h), builder, colorant, perfume, fragrance, or combinations; the type of metal.

Independent claim 18 is directed to “anti-corrosive coating” for a metal substrate comprising:

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(a) at least one quaternary ammonium carbonate, quaternary ammonium bicarbonate, or mixtures; and

(b) a coating material.

Claim 19 depends from claim 18 and requires that the species the (a) is “dispersed” in the coating material.

Independent claim 20 is directed to aqueous solution comprising a corrosion inhibiting effective amount of:

at least one quaternary ammonium carbonate, quaternary ammonium bicarbonate, or mixtures.

Claim 21 depends from claim 20 and requires the species that the solution is a “cleaning solution.”

None of the claims requires the simultaneous presence of at least one quaternary ammonium carbonate and at least one quaternary ammonium bicarbonate.

The claims are not interpreted to include organic carbonates or bicarbonates, i.e., esters, such as disclosed in Mizia et al. (US 4792417), cited by Applicant.

Claim Objections

Claims 20 and 21 are objected to under 37 CFR 1.75(i) as being in improper form because each of a plurality of elements or steps of the claim should be separated by a line indentation. See MPEP § 608.01(m).

Claim(s) Rejection(s)- 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The use of “at least one” is confusing. The claims are interpreted to mean “at least one of” or to mean a group listing as in claim 1.

Coating, Claim Rejections - 35 USC § 101 & 112

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 18 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 provides for a coating but, this is considered improper form, being indefinite and misdescriptive; a coating is associated with the thing coated; it is no longer a coating if it can be stripped or removed. *Ex parte Scott* 66 USPQ 371.

Claims 18 and 19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A "coating" per se cannot be patented because it does not exist by itself; once it is removed from that which it coats it ceases to be a coating and becomes a different entity, such as a film/mixture/composition/.../substance/material. One may patent a film/mixture/composition/.../substance/material 'suitable for use as a coating.' Alternatively, one may patent a coated substrate/thing/.../article.

This/these claim(s) has/have not been further treated on the merits.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-17 and 20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 and 15-21 of copending Application No. 11/299323. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter in each application encompasses part or all of the subject matter of the other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-17, 20, and 21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 11-17, 22-39, and 47 of copending Application No. 11/299301. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter in each application encompasses part or all of the subject matter of the other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-17, 20, and 21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17

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and 21-23 of copending Application No. 10/857636. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter in each application encompasses part or all of the subject matter of the other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-3 of this application conflict with claims 1-3 of Application No. 10/857636. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

Claims 20 and 21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 4-8 of U.S. Patent No. 6583181B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted carbonate for chloride in view of the plain suggestion to do so (column 3, lines 10-12). In addition, it would have been obvious to one of ordinary skill in the art at the time of the invention to

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have substituted sodium carbonate and sodium bicarbonate for the electrolyte EDTA in view of the plain suggestion to do so (column 3, lines 47-52), which would result in solutions having the same mixtures of ionic species as presently claimed and such would not be distinguishable from mixtures merely prepared by different sources of salts.

35 USC § 102 and 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim(s) Rejection(s)

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being obvious over Chiang et al. (US 6583181B1).

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention “by another”; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing

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that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted carbonate for chloride in view of the plain suggestion to do so (column 3, lines 10-12). In addition, it would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted sodium carbonate and sodium bicarbonate for the electrolyte EDTA in view of the plain suggestion to do so (column 3, lines 47-52), which would result in solutions having the same mixtures of ionic species as presently claimed and such would not be distinguishable from mixtures merely prepared using different sources of salts.

Claims 20 and 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hall et al. (US 5476615A).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

The reference '615 discloses aqueous mixtures comprising dialkyldimethyl ammonium chlorides (column 3, lines 17-44, examples, claims) and explicitly suggests equivalent carbonates (line 32) and surfactant as cleaning and disinfecting solutions.

In the event the reference is deemed to be of not sufficient specificity to sustain a conclusion of anticipation, then it is concluded that it would have been obvious to one of ordinary skill in the art at the time of the invention to have followed the plain suggestion

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of '615 and thus arrived at the subject matter encompassed by Applicant's claims. The discovery of a physical property does not lend patentability to an otherwise old or obvious composition.

Claims 1-6, 10, 11, 16, and 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hall et al. (US 5476615A).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

The reference '615 discloses aqueous mixtures comprising dialkyldimethyl ammonium chlorides (column 3, lines 17-44, examples, claims) and explicitly suggests equivalent carbonates (line 32) and surfactant as cleaning and disinfecting solutions. Suggested applications include cleaning of dairy and brewery tank and meat packing plants and parts (column 1, lines 16-17). Inherently encompassed are the metals which make up these articles.

In the event the reference is deemed to be of not sufficient specificity to sustain a conclusion of anticipation, then it is concluded that it would have been obvious to one of ordinary skill in the art at the time of the invention to have followed the plain suggestion of '615 and thus arrived at the subject matter encompassed by Applicant's claims.

The practice of "contacting" metal substrates as suggested by '615 would inherently achieve the result claimed.

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Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al. (US 5476615A) as applied to claims 1 and 11 above, and further in view of Hall et al. (US 5547990A).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

'615 is discussed hereinabove which is incorporated by reference. '615 does not disclose surfactant nonylphenol ethoxylate as required in claim 12.

'990 discloses cleaning mixtures similar to those in '615. '990 suggests further combining nonionic surfactants such as amine oxides, polyethylene oxide condensates of alkyl phenols, condensation products of ethylene oxide with products of propylene oxide and ethylene diamine, and condensation product of straight or branched chain aliphatic alcohols of 8 to 18 carbons with ethylene oxide (column 5, line 15 to column 6, line 17), particularly suggesting nonyl phenol ethoxylates (line 15). It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the suggested nonyl phenol ethoxylates for the amine oxides given the suggestion of equivalence in '990, in the mixtures of '615 since the disclosures are directed to the same field of endeavor and have obvious similarities.

Claim 20 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Walker (US 5438034A).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

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See examples.

Claims 1-6, 10, 17, and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lutz (US 6080789A).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

See example 14.

Claims 11 and 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lutz (US 6080789A).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

'789 suggests to include surfactants including linear alcohol ethoxylate (column 5, lines 4-8).

In the event the reference is deemed to be of not sufficient specificity to sustain a conclusion of anticipation, then it is concluded that it would have been obvious to one of ordinary skill in the art at the time of the invention to have followed the suggestion and thus arrived at subject matter encompassed by Applicant's claims.

Claims 1-4, 7, 8, 11, 12, 17, 20, and 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Torii et al. (US 5972862).

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The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

'862 discloses methods and mixtures for cleaning metal substrates without corroding same (column 8, lines 36-40) comprising tetramethyl ammonium salts (column 5, line 52 to column 6, line 47) such as bicarbonate or carbonate (column 6, lines 11-12) plus surfactant (column 7, line 62 to column 8, line 35) such as polyoxymethylene aryl ether (column 8, line 11, examples) and water (example 1). The examples employ tetramethyl ammonium formate and acetate, but the carbonate and bicarbonate species are listed and thus immediately envisaged.

In the event the reference is deemed to be of not sufficient specificity to sustain a conclusion of anticipation, then it is concluded that it would have been obvious to one of ordinary skill in the art at the time of the invention to have followed the suggestion and thus arrived at subject matter encompassed by Applicant's claims.

Claims 1-4, 7-9, 17, 20 and 21 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Hara et al. (EP 1211563A1).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

See examples 13-19.

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Claims 1-4, 7, 8, 11, 12, 17, 20, and 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ikemoto et al. (US 6372410B1).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference.

'410 discloses methods and mixtures for cleaning metal substrates without corroding same comprising tetramethyl ammonium salts (column 3, line 66 to column 4, line 6) such as carbonate (column 4, lines 5-6) plus surfactant (column 4, lines 34-37). The examples employ tetramethyl ammonium formate, but the carbonate specie is listed and thus immediately envisaged.

In the event the reference is deemed to be of not sufficient specificity to sustain a conclusion of anticipation, then it is concluded that it would have been obvious to one of ordinary skill in the art at the time of the invention to have followed the suggestion and thus arrived at subject matter encompassed by Applicant's claims. The surfactants of claims 11 and 12 are well known.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew A. Thexton whose telephone number is 571-272-1125. The examiner can normally be reached on Tuesday-Friday, 10:00 to 7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan S. Jagannathan can be reached on 571-272-1119. The fax

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phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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